III. Remarks

In the Examiner's Office Action, the Examiner rejected a number of claims in view of prior art references; namely, Japanese Reference JP10-306912 (the "JP reference") and GB Patent No. 1,084,342 (the "GB reference"). The Examiner further indicated that a number of dependent claims include allowable subject matter and would be allowed if amended to incorporate their base and any intervening claims. Applicants respectfully request reconsideration of the Office Action in view of the following remarks and appended claim amendments.

The numerous benefits of a sootblower frame assembly in accordance with this invention are detailed within the application specification and associated drawings. The invention provides a frame assembly which may be formed by bending sheet metal or plate metal stock, for example, using brake forming or roll forming operations. In addition to forming the channels within which the carriage rollers ride, the frame has a toothed rack which extends along the frame side panels for enabling the carriage to be advanced and retracted along the frame. This design provides numerous benefits over prior art sootblower frame structures. In addition to manufacturability advantages, the construction enables accurate fabrication and alignment of critical surfaces at the point of fabrication of the frame assembly. These features are not taught or described by the prior art references, including those cited in the subject Office Action.

The JP reference is cited as anticipating a number of pending claims. Since many of the features of the JP reference were not apparent from a review of its drawing figures and Abstract, applicants proceeded with obtaining an English translation of this document. A certified translation of the reference is enclosed for the Examiner's consideration. The JP reference, like the subject application,

describes a sootblower device of the long retracting type. A principal feature of the JP reference invention is the provision of a pair of tube supports (29 and 30) which support the feed tube and lance tube as the lance tube is inserted into the boiler. The tube supports travel with the carriage and include an articulation mechanism for releasing the tube supports from contact with the associated feed tube and lance tubes. The frame (or "running base") 24 in accordance with the JP reference appears to be an extruded structure which integrally forms top and side plates with pairs of upper and lower roller guides (25 and 26) extending inwardly from the frame side panels. Contrary to the Examiner's assertion, however, the frame structure in accordance with the JP reference is not of substantially uniform thickness. In the area of the upper and lower roller guides, the frame has a significantly thicker section than the remaining portions of the frame. As explained in the present application specification, substantially uniform thickness describes structures formed by taking metal stock, such as sheet metal or plate, and bending it through metal forming operations to form the various features for the frame side panels. Actual fabrication of the JP reference frame or running base (24) would be technically difficult, requiring very sophisticated and expensive extrusion equipment which could produce the cross-section illustrated in the figures as an integral structure.

In the Examiner's Office Action, it is asserted that a toothed rack shown as element 34 is described in the JP reference. Applicants respectfully disagree. No where in the English translation or drawings of the JP reference is there a description of a means by which the carriage 4 is advanced and retracted along the frame. No toothed rack or other engagement mechanism is described. The element 34 shown best in Figures 5 and 6 interact with a cam device (40, 41, 42) for raising and lowering the tube supports. The mechanism the Examiner refers to is clearly

not provided for advancing the carriage along the frame, but instead solely is for actuation of the tube support mechanism using a cam-type system as best illustrated in Figures 5 and 6.

The Office Action further references support tie bars and refers to Figures 1, 5, 6, and 9 in the JP reference. However, applicants respectfully submit that the only feature providing the function of a tie bar structure illustrated is the upper panel of the frame (24) which integrally connects the left and right-hand frame sides. The members extending across the interior cavity of the frame are components which move with the carriage and therefore are not tie bars in the sense used in the present application. Also contrary to the Office Action remarks, the JP reference does not illustrate a rear module in any figure provided. Applicants respectfully submit that the rejected independent claims are allowable, and therefore, the various dependent claims are also believed allowable.

The GB reference is also cited as anticipating a number of claims of the present application. The GB reference illustrates a sootblower having roller channels in the form of a rail (35) which may be formed from uniform thickness stock bent to form a "C" shaped cross-section. These rails (35) are affixed to side panels (30) of the sootblower frame to trap rollers (37) of the carriage. Unlike the sootblower of the present invention, the carriage of the GB reference is propelled along the frame through connection with a pair of endless chains (16) which are connected with the carriage. As shown in Figure 3, the endless chains (16) are connected with the carriage at a pair of projecting posts of the carriage. Figure 2 illustrates a drive mechanism in the form of a motor and sprockets for the chain positioned at the rear end of the frame assembly. The sootblower in accordance with the GB reference is driven conceptually in a manner of a conventional chain

driven garage door opener. This system does not include a toothed rack mounted to the frame formed by or affixed to the frame which is engaged by pinion gears of the carriage to advance the carriage along the frame. In the present invention, features to enable the sootblower carriage to be advanced and retracted along the frame are provided by the side panels. The critical alignment between the rollers, channel, and toothed rack is established by the side panels. The loads acting on the side channels are significantly different where the carriage traction forces are acting on the side panels. The GB reference sootblower moves the carriage by attaching the end of a loose chain to the carriage, and the rails merely allow the carriage to roll along the frame.

Applicants are making a number of claim amendments and cancellations by this Amendment. In reviewing the claims, applicants note that independent Claim 26 was intended to include subject matter which may be encompassed in the form of a dependent claim. Claim 26 is amended to place it in a dependent form, depending from Claim 1. Claim 26 was intended to describe the trapping of the carriage rollers in the support channel through attachment of a toothed rack to one of the track surfaces. This design feature is now recited in amended Claim 26, now presented in the form of a dependent claim. With this amendment, the dependent Claims 28 through 30, 33, and 34 become redundant in view of other pending claims and are therefore cancelled.

The Office Action indicates that Claims 3, 4, 6, 7, 14, through 18, 28, 29, 34, and 41 incorporate allowable subject matter. Applicants are accepting this indication of allowance and placing a number of claims in condition for allowance. Dependent Claims 3, 6, 14, 15, 16, 18, and 41 are amended to place them in allowable form by incorporating the elements of the independent claims from which they were

previously dependent. In reviewing the claims, applicants noted language of independent Claims 1 and 38 which are believed unnecessary. The claims stated the side panels function "for enclosing the carriage". Applicants believe that this could be interpreted as fully enclosing the carriage. However, the described frame assembly embodiments have an opened bottom surface, and the lower part of the carriage sides are exposed. Moreover, some of the described side panels are attached to other components to cover the sides of the frame assembly. Accordingly, this language is deleted from all independent claims, including those created from dependent claims indicated as including allowable subject matter.

Independent Claims 1 and 38 are amended to clarify the manner with which the invention is claimed. Claims 1 and 34 describe the toothed rack as being defined by or affixed to the frame and the carriage includes a drive pinion meshing with the toothed rack. The claims are amended to state that these elements are provided for driving the carriage along the frame assembly. As mentioned previously, the JP reference include no mention of a drive system for the carriage and the GB reference uses a chain-type drive and therefore does not include these elements. The significant differences between these types of sootblower frames is discussed above.

In view of the foregoing amendments are remarks, applicants respectfully submit that the application is in condition for allowance and such action by the Examiner is earnestly solicited.

Respectfully submitted,

September 8, 2008 /Steven L. Oberholtzer/
Date Steven L. Oberholtzer(Reg. No. 30,670)

Attachment: English Translation of JP 10-306912